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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/766,678

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Younger Ahluwalia

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11/14/2008

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EXAMINER

RUDDOCK, ULA CORINNA

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

11/14/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/766,678	Applicant(s) AHLUWALIA ET AL.	
	Examiner Ula C. Ruddock	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/19/08.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/18/08, 7/30/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Examiner has carefully considered Applicant's response filed August 19, 2008.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ahluwalia (US 5,965,257) in view of Farrar (US 5,338,349) and Langer (US 4,600,634). Ahluwalia disclose a structural article used in a wide variety of products including fire walls, vapor barriers, roofing underlayment, and facing sheets (col 3, ln 34-42). The articles comprise a substrate having an ionic charge which is coated with a coating having essentially the same ionic charge. The coating consists of a filler material and a binder material. The binder comprises an acrylic latex, specifically Hycar 2679 (col 3, ln 5-9). It should be noted that Hycar 2679 polymer emulsion contains synthetic soap, sometimes known as surface active agents or surfactants (col 7, ln 16-19), thus meeting Applicant's limitation of a surfactant component. Furthermore, because a surfactant is present in Ahluwalia's composition, surfactant-generated microcells would also be present in the material. The substrate is preferably fiberglass and the filler is selected from fly ash, charged calcium carbonate, and ceramic microspheres. The binder is preferably acrylic latex (abstract) or SBR latex (col 3, ln 11-12). Ahluwalia discloses the claimed invention except for the teaching of a gel catalyst component and that a metallic component is adhered to the coated substrate on one or both sides of the substrate.

Farrar (US 5,338,349) discloses a fire resistant and high temperature insulating composition. The composition comprises a binder and a gelling agent. The composition can be used as a coating composition (abstract). The composition can be coated onto articles made of glass and onto fabrics (col 2, ln 31-34). Other components of the composition include dyes and fungicides (col 2, ln 26-28). The binder used in the composition can be polyvinyl alcohol, which is a type of binder described in Applicant's specification at paragraph [0019]. The gelling agent is capable of absorbing water and expanding in size to provide a degree of elasticity to the moist composition (col 5, ln 26-29). It should be noted that the gelling agent of Farrar is being equated to the gel catalyst of the present invention.

Langer (US 4,600,634) discloses flexible fibrous endothermic sheet materials for fire protection. The flexible sheet is made of fiberglass and acrylic binder and is useful in building construction (abstract). Fillers useful in the composition include alumina trihydrate (col 3, ln 59). A backing, comprising an aluminum foil, is added to the backing of the sheet material to give an added degree of strength to the sheet material (col 4, ln 8-10).

It would have been obvious to have used Farrar's gelling agent in the composition of Ahluwalia and Langer, motivated by the desire to create a composition that has some degree of elasticity and to improve the fire resistance of the coated material.

It also would have been obvious to one having ordinary skill in the art to have added Langer's aluminum sheet to one or both sides of the coated substrate of Ahluwalia and Farrar, motivated by the desire to create a structural article with increased strength and durability.

Rejection is maintained.

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4. Claims 2-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahluwalia (US 5,965,257) in view of Farrar (US 5,338,349) and Langer (US 4,600,634) and GB 2167060 (GB '060) or Dugan (US 4,994,317) or Dombeck (US 6,228,497). Ahluwalia disclose a structural article used in a wide variety of products including fire walls, vapor barriers, roofing underlayment, and facing sheets (col 3, ln 34-42). The articles comprise a substrate having an ionic charge which is coated with a coating having essentially the same ionic charge. The coating consists of a filler material and a binder material. The binder comprises an acrylic latex, specifically Hycar 2679 (col 3, ln 5-9). It should be noted that Hycar 2679 polymer emulsion contains synthetic soap, sometimes known as surface active agents or surfactants (col 7, ln 16-19), thus meeting Applicant's limitation of a surfactant component. Furthermore, because a surfactant is present in Ahluwalia's composition, surfactant-generated microcells would also be present in the material. The substrate is preferably fiberglass and the filler is selected from fly ash, charged calcium carbonate, and ceramic microspheres. The binder is preferably acrylic latex (abstract) or SBR latex (col 3, ln 11-12). The articles are planar in shape and the substrate is coated on one side or both sides depending on the intended application (col 3, ln 42-44). The structural material may be coated on one or both sides with a water repellent material, an algacide, an antifungal material, an antibacterial material, a surface friction agent, a flame retardant material, and a coloring dye (col 3, ln 54-67 to col 4, ln 1-3). The structural article contains 10-25% by weight glass fibers (claim 13) and the coating comprises nearly 85% by weight of the article (col 3, ln 17-18). Ahluwalia discloses the claimed invention except for the specific teaching that clay is added to the coating

and the teaching of a gel catalyst component and that a metallic component is adhered to the coated substrate on one or both sides of the substrate.

Farrar (US 5,338,349) discloses a fire resistant and high temperature insulating composition. The composition comprises a binder and a gelling agent. The composition can be used as a coating composition (abstract). The composition can be coated onto articles made of glass and onto fabrics (col 2, ln 31-34). Other components of the composition include dyes and fungicides (col 2, ln 26-28). The binder used in the composition can be polyvinyl alcohol, which is a type of binder described in Applicant's specification at paragraph [0019]. The gelling agent is capable of absorbing water and expanding in size to provide a degree of elasticity to the moist composition (col 5, ln 26-29). It should be noted that the gelling agent of Farrar is being equated to the gel catalyst of the present invention.

Langer (US 4,600,634) discloses flexible fibrous endothermic sheet materials for fire protection. The flexible sheet is made of fiberglass and acrylic binder and is useful in building construction (abstract). Fillers useful in the composition include alumina trihydrate (col 3, ln 59). A backing, comprising an aluminum foil, is added to the backing of the sheet material to give an added degree of strength to the sheet material (col 4, ln 8-10).

It would have been obvious to have used Farrar's gelling agent in the composition of Ahluwalia and Langer, motivated by the desire to create a composition that has some degree of elasticity and to improve the fire resistance of the coated material.

It also would have been obvious to one having ordinary skill in the art to have added Langer's aluminum sheet to one or both sides of the coated substrate of Ahluwalia and Farrar, motivated by the desire to create a structural article with increased strength and durability.

GB 2167060 discloses a fire resistant material comprising glass wool fibers and one or more selected clays (abstract). The clays are selected to provide an endothermic reaction in the fire resistant material (page 2, ln 5-11). Dugan et al. (US 4,994,317) disclose a fabric suitable for use as a flame barrier fabric comprising a flame durable textile fabric (abstract). The fabric comprises inorganic yarns such as glass (col 2, ln 37). To provide enhanced resistant to flame and heat, hydrated clay may be incorporated in a silicone layer (col 3, in 58-61). Dombeck (US 6,228,497) disclose a high temperature resistant glass fiber composition comprising glass fibers and a latex binder (abstract). Clay fillers are frequently added to inorganic fiber products to improve their fire resistance (col 1, ln 19-21 and col 5, ln 4-7). It would have been obvious to one having ordinary skill in the art to have added the clay filler taught by GB 2167060 or Dugan et al. or Dombeck to the composite of Ahluwalia and Farrar and Langer, motivated by the desire to create a substrate that has increased flame resistance.

Rejection is maintained.

Response to Arguments

5. Applicant's arguments filed July 28, 2008 have been fully considered but they are not persuasive for the reasons set forth. Applicant argues that claim 1 does not include a substrate and therefore, "if a person of ordinary skill in the art were motivated to increase the strength and durability of a structural article, he or she would not omit an element, i.e. the substrate, while

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retaining the element's function." This argument is not persuasive because although the combination of Ahluwalia and Farrar and Langer includes additional layers that are not required by application's invention, it must be noted that the references do disclose the invention as claimed. The fact that it discloses additional structure not claimed is irrelevant. Furthermore, the claims are drawn to a composite, which by its definition, is "made up of disparate or separate parts or elements." Therefore, if there is no substrate, claim 1 would only be drawn to a coated metallic layer, not to a composite. Finally, the claims do not preclude the use of a substrate, as presently written, i.e. "consisting essentially of" language. Consisting essentially of" only excludes components that will affect the basic and novel characteristics of the invention and the burden is on Applicant to show that the additional components do affect the basic and novel characteristics. Applicant further argues that nothing in the cited references suggests adhering a metallic component to a composite material comprising a substrate having an ionic charge coated with a coating having essentially the same ionic charge, wherein the coating does not bleed through the substrate. Applicant further argues that nothing in any of the cited references suggest the inclusion of clay among filler components to produce a coating that does not bleed through a substrate that has essentially the same ionic charge as the substrate. These arguments are not persuasive because Applicant cannot show non-obviousness by attacking references individually where, as here, the rejections are based on a combination of references. *In re Keller*, 208 USPQ 871 (CCPA 1971). References are evaluated by what they suggest to one versed in the art. The test for obviousness is not whether the features of the reference may be bodily incorporated into the other to produce the claimed subject matter, but simply what the references make obvious to one having

ordinary skill in the pertinent art. *In re Bozek*, 163 USPQ 545 (CCPA 1969). The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). In this case the Ahluwalia reference discloses the claimed invention except for the teaching that a metallic component is adhered to the coated substrate on one or both sides of the substrate and that the metallic component is from 5-10% by weight of said composite material and the specific teaching that clay is added to the coating. Farrar discloses a gelling agent that is capable of absorbing water and expanding in size to provide a degree of elasticity to the moist composition (col 5, ln 26-29). It is suggested that Applicant further define the claimed gel catalyst by incorporating language from the specification. Langer discloses an aluminum foil backing that is added to the backing of the sheet material to give an added degree of strength to the sheet material. GB '060, Dugan, and Dombeck all disclose clay as a preferred filler material because it provides increased fire resistance. Therefore, the combination of disclosures taken as a whole properly reject the presently claimed invention. As a result, the rejection is maintained.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the

date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/U. C. R./

/Ula C Ruddock/
Primary Examiner, Art Unit 1794

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